

Edited by

LYTT I. GARDNER, M.D.

Professor of Pediatrics, State University of New York,
Upstate Medical Center, Syracuse, New York

*Endocrine
and
Genetic Diseases
of
Childhood
and Adolescence*

SECOND EDITION



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CONTRIBUTORS

CONSTANTINE S. ANAST, M.D.

Professor of Child Health, University of Missouri School of Medicine. Attending Pediatrician, University Hospital, Columbia, Missouri. Associate Chief of Staff for Research, Veterans Administration Hospital, Columbia, Missouri.
Development of the normal embryonic, fetal and neonatal parathyroid; Tetany of the newborn; Calcitonin

HENNING J. ANDERSEN, M.D. dr. med.

Professor of Pediatrics, University of Copenhagen, Denmark; Chief, University Pediatric Clinic, Fuglebakken, Copenhagen, Denmark.
Nongoitrous hypothyroidism

GERALD J. BARGMAN, M.D.

Assistant Professor of Pediatrics, and Head, Division of Pediatric Endocrinology, Center for Health Sciences, University of Wisconsin School of Medicine, Department of Pediatrics, Madison, Wisconsin.
Achondroplasia and thanatophoric dwarfism: With a review of several forms of short-limb dwarfism (With Leonard O. Langer, Jr. and John M. Opitz); Hypoglycemia (With Yoza Ichiba); Genetic Defects in Protein Metabolism; Cystic Fibrosis

WILLIAM H. BERGSTROM, M.D.

Professor of Pediatrics, Upstate Medical Center, State University of New York. Attending Physician, University Hospital and Crouse Irving Memorial Hospital, Syracuse, New York.
Hereditary metabolic bone diseases

HANS H. BODE, M.D.

Assistant Professor of Pediatrics, Harvard Medical School; Associate Pediatrician, Massachusetts General Hospital and Shriners Hospital for Crippled Children; Attending Pediatrician, Burns Institute, Boston, Massachusetts.
Disorders of the posterior pituitary in children (With John D. Crawford)

W. ROY BREG, M.D.

Associate Clinical Professor of Human Genetics, and Pediatrics, Yale University School of Medicine. Senior Physician, Southbury Training School, Southbury,

Connecticut. Physician to the Outpatient Clinic (Pediatrics), Yale-New Haven Medical Center.

Abnormalities of chromosomes 4 and 5; Down's syndrome (mongolism)

GERSON CARAKUSHANSKY, M.D.

Associate Professor of Pediatrics, School of Medicine, Federal University, Rio de Janeiro. Chief, Research Division, Instituto de Puericultura da U. F. R. J., Rio de Janeiro, Brazil.

The Lipidoses; Disorders of Heme and Porphyrin Metabolism

GEORGE W. CLAYTON, M.D.

Professor of Pediatrics, Baylor College of Medicine. Chief of Endocrinology, Texas Children's Hospital, Houston, Texas.

Thyroiditis in children (With John L. Kirkland); Thyroid carcinoma (With Rebecca T. Kirkland)

ELEANOR COLLE, M.D.

Associate Professor, Department of Pediatrics, McGill University. Director, Endocrinology, Montreal Children's Hospital, Montreal, Quebec, Canada.

Diabetes mellitus (With Elsa Proehl Paulsen)

THOMAS E. CONE, JR., M.D.

Clinical Professor of Pediatrics, Harvard Medical School. Senior Associate in Clinical Genetics and Medicine, The Children's Hospital Medical Center, Boston, Massachusetts.

Historical introduction to Disorders of Catecholamine Metabolism

JOHN D. CRAWFORD, M.D.

Associate Professor of Pediatrics, Harvard Medical School. Chief of Endocrine-Metabolic Unit, Children's Service, Massachusetts General Hospital. Chief of Pediatrics, Shriners Burns Institute, Boston, Massachusetts.

Disorders of the posterior pituitary in children (With Hans H. Bode)

FRANK FALKNER, M.D., F.R.C.P.

Fels Professor of Pediatrics, University of Cincinnati College of Medicine. Director, Fels Research Institute, Yellow Springs, Ohio.

Normal growth patterns of the newborn and the preadolescent

WALTER FLEISCHMANN, M.D., Ph.D.

Consultant in Pathology, Veterans Administration Hospital, Mountain Home, Johnson City, Tennessee.

Historical introduction to Disorders of the Parathyroid and C (Calcitonin) Cells; Historical introduction to Disorders of the Adrenal Cortex

J. ROSWELL GALLAGHER, M.D.

Emeritus Clinical Professor of Pediatrics, Yale University School of Medicine. Emeritus Chief, The Adolescents' Unit, Children's Hospital Medical Center, Boston, Massachusetts.

Short and tall stature in otherwise normal adolescents: Management of their medical and psychologic problems

LYTT I. GARDNER, M.D.

Professor of Pediatrics, Upstate Medical Center, State University of New York. Director, Regional Genetic Center, Birth Defects Institute, New York State Health Department. Attending Pediatrician, State University Hospital; Consulting Pedia-

trician, Crouse Irving Memorial Hospital and St. Joseph's Hospital, Syracuse, New York.

Deprivation dwarfism (psychosocial deprivation): Disordered family environment as cause of so-called idiopathic hypopituitarism (With Robert Gray Patton); Historical notes on cretinism; Development of the normal fetal and neonatal adrenal; Disorders of the Gonads; Ambiguous and abnormal genitalia (With Robert J. Schlegel); Abnormalities of the sex chromosomes (With Richard L. Neu); Other abnormalities of potassium metabolism; Disorders of magnesium metabolism; Endocrine aspects of undernutrition: Protein-calorie malnutrition, psychosocial deprivation and anorexia nervosa; Neonatal Genetic and Endocrine Diagnosis via Screening Programs; Genetic Counseling (With John W. Wood); Metabolic and Genetic Syndromes of Overgrowth (With Yozo Ichiba)

ROBERT E. GREENBERG, M.D.

Chairman, Department of Pediatrics, University of New Mexico School of Medicine, Albuquerque, New Mexico.

The physiology and metabolism of catecholamines; Pheochromocytomas

JAMES HADDOW, M.D.

Associate Clinical Professor of Pediatrics, Tufts Medical School, Maine Medical Center, Portland, Maine.

Hyperparathyroidism (With Robert Klein); Hypoparathyroidism (With Robert Klein)

NIILO HALLMAN, M.D.

Professor of Pediatrics, University of Helsinki. Chief Physician, Children's Hospital, Helsinki, Finland.

Congenital sugar malabsorption (With Kari Launiala)

J. C. HAWORTH, M.D.

Professor of Pediatrics, University of Manitoba, Pediatrician, Health Sciences Center, Winnipeg, Manitoba, Canada.

Carbohydrate metabolism in the fetus and the newborn; neonatal hypoglycemia

FELIX P. HEALD, M.D.

Professor of Pediatrics, University of Maryland School of Medicine, Baltimore; Director, Division of Adolescent Medicine, University Hospital, Baltimore, Maryland.

Obesity in children and adolescents (With Mushtaq Ahmad Khan)

FREDERICK HECHT, M.D.

Professor of Pediatrics and Medical Genetics, University of Oregon Medical School; Codirector, Genetics Clinic, Child Development and Rehabilitation Center, and Codirector, Clinical Cytogenetics Laboratory, University of Oregon, Portland, Oregon.

Autosomal Abnormalities: A group chromosomes (With Everett W. Lovrien, R. Ellen Magen-Heath, Barbara Kaiser McCaw and Herman E. Wyandt)

ARON HOLZEL, M.D., F.R.C.P (Ed. and Lond.), D.C.H.

Emeritus Professor of Child Health, University of Manchester. Consultant Pediatrician, Booth Hall Children's Hospital and Royal Manchester Children's Hospital, Manchester, England.

Galactosemia (hereditary galactose-1-phosphate uridyl transferase deficiency disease)

WELLINGTON HUNG, M.D.

Professor of Child Health and Development, George Washington University, Washington, D.C. Endocrinologist, Senior Attending Staff, Children's Hospital National Medical Center; Chief, Section of Endocrinology, Research Foundation of Children's Hospital National Medical Center. Consultant in Pediatrics, Washing-

ton Hospital Center; Providence Hospital, Washington, D.C.; DeWitt Army Hospital, Fort Belvoir, Virginia. Visiting Faculty in Pediatrics, U.S. Naval Medical Center, Bethesda, Maryland.

Physiologic changes in the thyroid during childhood and adolescence

JAMES H. HUTCHISON, M.D., F.R.C.P., F.A.C.P. (Hon.)

Professor of Child Health, University of Glasgow, Glasgow. Consultant Pediatrician, Royal Hospital for Sick Children, and The Queen Mother's Hospital, Glasgow, U.K.

Familial goitrous hypothyroidism

YOZO ICHIBA, M.D.

Staff Member in Pediatrics, Okayama National Children's Hospital, Okayama, Japan.

Hypoglycemia (With Gerald J. Bargman); *Metabolic and Genetic Syndromes of Overgrowth* (With Lytt I. Gardner)

MICHAEL M. KABACK, M.D.

Associate Professor, Departments of Pediatrics and Medicine, U.C.L.A. School of Medicine, Los Angeles. Associate Chief, Division of Medical Genetics, Harbor General Hospital, Torrance, California.

Prenatal Genetic Diagnosis (With Jaakko T. Leisti and Marshall D. Levine)

TADASHI KAJII, M.D., Dr. Med. Sc.

Assistant Professor, Faculty of Medicine, University of Geneva. Attending Physician, University Clinic of Gynecology and Obstetrics, Geneva, Switzerland.

Other autosomal abnormalities (With Richard L. Neu)

SOLOMON A. KAPLAN, M.D.

Professor of Pediatrics, University of California at Los Angeles. Head, Division of Endocrinology and Metabolism, University of California Medical Center, Los Angeles.

Hypopituitarism

MUSHTAQ AHMAD KHAN, M.S. Ph.D.

Assistant Professor of Pediatrics, University of Maryland School of Medicine, Baltimore. Assistant Professor of Physiology and Pharmacology, University of Agriculture, Lyallpur, Pakistan.

Obesity in children and adolescents (With Felix P. Heald)

JOHN L. KIRKLAND, M.D.

Fellow in Pediatric Endocrinology, Baylor College of Medicine, Houston, Texas.

Thyroiditis in children (With George W. Clayton)

REBECCA T. KIRKLAND, M.D.

Fellow in Pediatric Endocrinology, Baylor College of Medicine, Houston, Texas.

Thyroid carcinoma (With George W. Clayton)

ROBERT KLEIN, M.D.

Lecturer in Pediatrics, Harvard Medical School. Director, Childhood Lead Poisoning Prevention Program, Commonwealth of Massachusetts.

Hyperparathyroidism (With James Haddow); *Hypoparathyroidism* (With James Haddow); *Periodic paralysis*

HARVEY D. KLEVIT, M.D.

Clinical Professor of Pediatrics, University of Oregon Medical School. Attending

Pediatrician, Bess Kaiser Hospital, Portland, Oregon.

Iatrogenic thyroid disease

M. PIERRE KOENIG, M.D.

Associate Professor of Medicine, Faculty of Medicine, University of Berne, Switzerland. Chief Clinical Endocrinologist, University Medical Clinic, Inselspital Berne, Switzerland; Consultant Endocrinologist, University Children's Hospital, Berne, Switzerland.

Endemic Goiter and Endemic Cretinism

LEONARD O. LANGER, M.D.

Clinical Associate Professor, Radiology, University of Minnesota Medical School. Radiologist, Fairview Hospital, Fairview-Southdale Hospital, and Golden Valley Health Center, Minneapolis, Minnesota.

Achondroplasia and thanatophoric dwarfism: With a review of several forms of short limb dwarfism (With Gerald J. Bargman and John M. Opitz)

KARI LAUNIALA, M.D.

Docent of Pediatrics, University of Helsinki. Assistant Chief Physician, Children's Hospital, Helsinki, Finland.

Congenital sugar malabsorption (With Niilo Hallman)

JAAKKO T. LEISTI, M.D.

Fellow, Division of Medical Genetics, University of California at Los Angeles, Harbor General Hospital, Torrance, California.

Prenatal Genetic Diagnosis (With Michael M. Kaback and Marshall D. Levine)

MARSHALL D. LEVINE, M.D.

Fellow, Division of Medical Genetics, University of California at Los Angeles, Harbor General Hospital, California.

Prenatal Genetic Diagnosis (With Michael M. Kaback and Jaakko T. Leisti)

JUNE K. LLOYD, M.D., F.R.C.P.

Professor of Child Health, St. George's Hospital Medical School, University of London. Consultant Pediatrician, St. George's Hospital, London, England.

Disturbances of Serum Lipoproteins (With Otto H. Wolff)

EVERETT W. LOVRIEN, M.D.

Associate Professor of Pediatrics and Medical Genetics, University of Oregon Medical School; Codirector, Genetics Clinic, Child Development and Rehabilitation Center; Director, Genetic Marker Laboratory, University of Oregon Medical School, Portland, Oregon.

Autosomal abnormalities: A group chromosomes (With Frederick Hecht et al.)

R. ELLEN MAGENIS-HEATH, M.D.

Assistant Professor of Pediatrics and Medical Genetics; Director of Genetic Training, Child Development and Rehabilitation Center; Codirector, Clinical Cytogenetics Laboratory, University of Oregon Medical School, Portland, Oregon.

Autosomal abnormalities: A group chromosomes (With Frederick Hecht et al.)

BARBARA KAISER McCRAW, Ph.D.

Postdoctoral Fellow, Department of Medical Genetics, University of Oregon Health Sciences Center, Portland, Oregon.

Autosomal abnormalities: A group chromosomes (With Frederick Hecht et al.)

WILLIAM J. MELLMAN, M.D.

Professor and Chairman, Department of Human Genetics, University of Pennsylvania Medical School, Philadelphia. Senior Physician, Children's Hospital of Philadelphia, Pennsylvania.

Familial chromosome translocations (With Hope H. Punnett)

MICHAEL E. MILLER, M.D.

Associate Professor, Charles R. Drew Postgraduate Medical School, and University of California at Los Angeles. Director of Research, Los Angeles County Martin Luther King, Jr. General Hospital.

Immunogenetics (With Robert J. Schlegel)

JOHN MONEY, Ph.D.

Professor of Medical Psychology; Associate Professor of Pediatrics, Johns Hopkins University School of Medicine. Psychologist, The Johns Hopkins Hospital, Baltimore, Maryland.

Psychologic counseling: Hermaphroditism; Intellectual functioning in childhood endocrinopathies and related cytogenetic disorders; Counseling; Syndromes of statural hypoplasia and hyperplasia, precocity and delay; Sex education and infertility counseling in various endocrine-related syndromes: The juvenile and adolescent years

H. DAVID MOSIER, Jr., M.D.

Professor of Pediatrics; Head of Division of Pediatric Endocrinology and Metabolism, University of California College of Medicine, Irvine. Attending Staff, Earl and Lorraine Miller Children's Hospital, Long Beach, California.

Hyperthyroidism; Euthyroid goiter: Diagnosis and Management; Interpretation of thyroid function tests

RICHARD L. NEU, Ph.D.

Assistant Professor, Department of Pediatrics, State University of New York, Upstate Medical Center, Syracuse, New York.

Cytogenetic techniques and terminology; Other autosomal abnormalities (With Tadashi Kajiji); *Abnormalities of the sex chromosomes* (With Lytt I. Gardner)

WILLIAM L. NYHAN, M.D., Ph.D.

Professor and Chairman, Department of Pediatrics, University of California at San Diego, School of Medicine, San Diego, California.

Genetic Defects of Amino Acid and of Purine Metabolism

JOHN M. OPITZ, M.D.

Director, Wisconsin Clinical Genetics Center, University of Wisconsin, Madison, Wisconsin.

Achondroplasia and thanatophoric dwarfism: With a review of several forms of short-limb dwarfism (With Gerald J. Bargman and Leonard O. Langer, Jr.)

CLAUDIO C. ORTEGA, M.D.

Research Fellow in Genetics, State University of New York, Upstate Medical Center, Syracuse, New York. Staff Member, Centro de Habilitação de APAE, São Paulo, SP, Brazil.

The Mucopolysaccharidoses

ROBERT GRAY PATTON, M.D.

Assistant Clinical Professor in Pediatrics, University of California School of Medicine. Director, Pediatric Endocrine Clinic, Children's Hospital, San Francisco, California.

Deprivation dwarfism (psychosocial deprivation): Disordered family environment as cause of so-called idiopathic hypopituitarism (With Lytt I. Gardner)

ELSA PROEHL PAULSEN, M.A., M.D.

Associate Professor of Pediatrics; Assistant Professor of Biochemistry, University of Virginia School of Medicine. Attending Pediatrician, University of Virginia Hospital, Charlottesville, Virginia.
Diabetes mellitus (With Eleanor Colle)

JAAKKO PERHEENTUPA, M.D.

Associate Professor of Pediatrics, University of Helsinki. Pediatrician and Endocrinologist, University Children's Hospital, Helsinki, Finland.
Fructose intolerance

HOPE H. PUNNETT, Ph.D.

Professor of Pediatrics, Temple University School of Medicine, Philadelphia. Chief of Genetics and Director, Cytogenetics Laboratory, St. Christopher's Hospital, Philadelphia, Pennsylvania.
Familial chromosome translocations (With William J. Mellman)

CAROLYN A. ROMSHE, M.D.

Assistant Professor of Pediatrics, Ohio State University College of Medicine. Division of Endocrinology and Metabolism, Department of Pediatrics, Children's Hospital, Columbus, Ohio.
Giantism and acromegaly (With Juan F. Sotos); *Pituitary tumors* (With Juan F. Sotos)

IRA M. ROSENTHAL, M.D.

Professor of Pediatrics, Abraham Lincoln School of Medicine, University of Illinois College of Medicine. Attending Pediatrician, University of Illinois Hospital and Cook County Hospital, Chicago, Illinois.
Sexual infantilism

ROBERT J. SCHLEGEL, M.D.

Professor of Pediatrics, Charles R. Drew Postgraduate Medical School and University of California at Los Angeles. Director of Clinical Services, Department of Pediatrics, Los Angeles County Martin Luther King, Jr. General Hospital.
Ambiguous and abnormal genitalia (With Lytt I. Gardner); *Immunogenetics* (With Michael E. Miller)

THOMAS HILL SHEPARD, M.D.

Professor of Pediatrics and Head, Central Laboratory of Human Embryology, University of Washington, Seattle. Attending Pediatrician, University Hospital and Children's Orthopedic Hospital and Medical Center, Seattle, Washington.
Growth and development of the human embryo and fetus; Development of the thyroid gland

JAMES B. SIDBURY, Jr., M.D.

Professor of Pediatrics, Duke University Medical Center. Consulting Pediatrician, Duke University Hospital and Watts Hospital, Durham, North Carolina.
The glycogenoses

DAVID W. SMITH, M.D.

Professor of Pediatrics, University of Washington Medical School, Seattle, Washington.
The 18 trisomy and 13 trisomy syndromes

EDNA H. SOBEL, M.D.

Professor of Pediatrics, Albert Einstein College of Medicine of Yeshiva. Director of Pediatric Endocrinology, Albert Einstein College of Medicine and Bronx Municipal Hospital, Bronx, New York.
Organic disorders interfering with somatic growth

HUBERT C. SOLTAN, M.D., Ph.D.

Associate Professor of Anatomy and Clinical Associate Professor in Pediatrics, University of Western Ontario. Medical Staff, University Hospital, London, Ontario, Canada.

Dermatophysics in Medical Genetics (With Irene A. Uchida)

JUAN F. SOTOS, M.D.

John W. Champion Professor of Pediatrics; Director of Division of Endocrinology and Metabolism, Department of Pediatrics, College of Medicine, Ohio State University. Director of Division of Endocrinology and Metabolism, Children's Hospital, Columbus, Ohio.

Giantism and acromegaly (With Carolyn A. Romshe); *Pituitary tumors* (With Carolyn A. Romshe)

ROBERT S. STEMPFEL, Jr., M.D.

Professor of Pediatrics, University of Miami. Director, Mailman Center for Child Development, Miami, Florida.

Introduction to abnormalities of sexual differentiation

JAMES M. TANNER, M.D., Ph.D., D.Sc., F.R.C.P.

Professor of Child Health and Growth, Institute of Child Health, University of London. Physician to the Hospital for Sick Children, London, England.

Growth and endocrinology of the adolescent

IRENE A. UCHIDA, Ph.D.

Professor, Department of Pediatrics, McMaster University, Hamilton, Ontario. Director, Regional Cytogenetics Laboratory, McMaster University Medical Center, Hamilton, Ontario, Canada.

Dermatophysics in Medical Genetics (With Hubert C. Soltan)

JACOB J. VAN DER WERFF TEN BOSCH, M.D.

Professor of Physiology, Department of Endocrinology, Growth and Reproduction, Erasmus Universiteit, Rotterdam, The Netherlands.

Isosexual precocity

HENDRIKK A. VISSER, M.D.

Professor of Pediatrics, Erasmus Universiteit, Rotterdam. Chairman, Department of Pediatrics, Academic Hospital, Sophia Children's Hospital and Neonatal Unit, Rotterdam, The Netherlands.

Hypoadrenocorticism

MARY L. VOORHESS, M.D.

Professor of Pediatrics, State University of New York, Upstate Medical Center, Syracuse. Chief, Department of Pediatrics, Crouse Irving Memorial Hospital; Attending Pediatrician, University Hospital; Consultant, St. Joseph's Hospital, Syracuse, New York.

Adrenal function in severe infections; The syndrome of ganglioneuroma and chronic diarrhea; Neuroblastoma

JEREMY S. D. WINTER, M.D.

Associate Professor of Pediatrics, University of Manitoba School of Medicine, Endocrinologist, Health Sciences Center (Children's Center), Winnipeg; Consultant, St. Boniface's Hospital, Winnipeg, Manitoba, Canada. Consultant, International Centre of Environmental Safety, Albany Medical College, Holloman Air Force Base, New Mexico.

Cushing's syndrome in childhood; Adrenal tumors in childhood

OTTO H. WOLFF, M.D., F.R.C.P.

Nuffield Professor of Child Health, Institute of Child Health, University of London.
Physician, Hospital for Sick Children, London, England.
Disturbances of Serum Lipoproteins (With June K. Lloyd)

JOHN WADSWORTH WOOD, M.D.

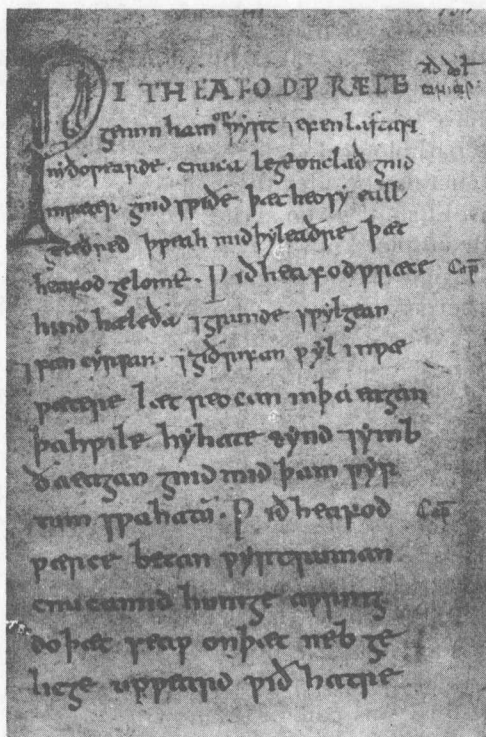
Clinical Associate Professor of Pediatrics, Boston University School of Medicine;
Lecturer in Pediatrics, Harvard Medical School and Tufts University School of
Medicine. Director of Medical Affairs, Joseph P. Kennedy, Jr. Memorial Hospital
for Children, Brighton. Associate in Medicine, Children's Hospital Medical Center,
Boston, Massachusetts.
Genetic Counseling (With Lytt I. Gardner)

HERMAN E. WYANDT, Ph.D.

Instructor in Medical Genetics, University of Oregon Medical School. Technical
Supervisor, Clinical Cytogenetics Laboratory, University of Oregon Medical School,
Portland, Oregon.
Autosomal abnormalities: A group chromosomes (With Frederick Hecht et al.)

ROLF P. ZURBRÜGG, M.D.

Privatdozent of Pediatrics, University of Berne School of Medicine. Chief of Pedi-
atrics, Wildermeth Children's Hospital, Bienne, Switzerland.
Congenital adrenal hyperplasia



British Museum MS. Harley 585 fo. 130a
First page of *Lacnunga*

Pagan Charm Against Elfshot

Loud were they, yea loud, when they rode over the hill;
Fierce were they, when they rode over the land.
Shield thou thee now: then mayest thou survive this onset.
Out little spear, if herein thou be.
Stood he under the linden [shield], under the light shield,
Where the mighty women got ready their powers,
And the whizzing darts they sent.
I back to them will send another,
A flying shaft in defense against them.
Out, little spear, if herein it be;
Sat a smith, a knife he sledged,
Small the iron, woeful the wound.
Out little spear, if herein it be;
Six smiths sat; battle spears they wrought.
Out, out, spear! not in spear!
If herein be of iron a fragment,
Hag's work, it shall melt away.
If thou wert shot in skin, or shot in flesh,
Or shot in blood, or shot in bone,
Or shot in limb, may thy life ne'er be shattered.
Were it Aesir shot, or Elves' shot,
Or Hag's shot, now I will help thee.
This is thy cure of Aesir shot; this to thy cure of Elves' shot;
This to thy cure of Hag's shot; I will help thee."

From: Grattan, J. H. G. and Singer, C.:
Anglo-Saxon Magic and Medicine:
Illustrated Specially from the Semi-
pagan Text "*Lacnunga*". (Oxford University
Press and the Wellcome Historical
Medical Museum, London, 1952).

PREFACE TO THE SECOND EDITION

In the Preface to the First Edition of this book we leaned heavily on the therapeutic techniques in the Yellow Emperor's Classic of Internal Medicine: the five poison medicines and acupuncture. Six years have passed since our first edition, and unfortunately, disease (especially genetic disease, *vide infra*) is increasing by leaps and bounds. We have used the poison medicines – not five but five hundred – nay even acupuncture – and we have not conquered the ancient enemy. There is no choice but to invoke the magical chants of the Anglo-Saxon leechdoms. These modalities of healing call upon all the powers of the old (and sometimes the new) gods to war against disease. Disease is embodied in 1. the flying venoms, 2. the evil nines, 3. the worm or serpent and 4. the aweson e power of elves, and especially of elfshot.

Elfshot is a characteristic syndrome, in which the patient may complain of a sudden substernal pain with radiation down the inner aspect of the left arm; or he may suffer excruciating, colicky flank pain associated with the passage of urinary gravel. It may take other forms. Although there have been some recent theories that these symptoms are related to endogenous pathological changes in internal organs, most fair-minded practitioners of leechcraft consider these as classical examples of elfshot. The "Pagan Charm Against Elfshot" given at the top of page xv is in heroic style and is one of the finest examples known. It is from the surviving manuscript of *Lacnunga*, a chronicle of Anglo-Saxon magico-medicine written in about the year 1000 A.D. Included therein, for those who like to putter around in the kitchen, is the "Elfshot Recipe": "For sudden stitch: Feverfew, and the red nettle that groweth through into a house, and waybread. Boil in butter." In addition, in a sort of broad-spectrum therapeutic approach, the *Lacnunga* also provides a "Spell Against Flying Venom" which calls on the new Christian god to help too. The Anglo-Saxons had been Christianized for about 500 years when *Lacnunga* was written.

Few of *Lacnunga*'s prescriptions have survived as well as the Yellow Emperor's acupuncture. *Lacnunga* describes the beneficial effects of the plant "foxcliffe" for cough (? pulmonary congestion of cardiac decompensation). Whether this phonetic rendition of an eleventh century folk term written in Anglo-Saxon script refers to *foxglove* is not known, but it is an attractive hypothesis that the purple foxglove (*Digitalis purpurea*) was the plant in question. It is very possible that the purple foxglove as treatment for dropsy was part of the oral tradition of the early leech (practitioner), since William Withering got his clue for this use of digitalis from a herb practitioner in Shropshire, England. The use of horehound for cough was also recommended in the manuscript, and this has survived intact as a folk medicine right to the present day. Grattan and Singer allude to the scribe of *Lacnunga* as dwelling in the barbarian world of magic and hardly emerging therefrom. But what we have seen suggests some flashes of the light that was gradually to illumine Western pharmacognosy.

An earlier mention was made of the "increase" in genetic disease. Since the First Edition of this textbook six years ago, the total of human hereditary traits listed in McKusick's *Mendelian Inheritance in Man* has rapidly increased in number (from a total of 1545 to 2336). The rapid expansion of scientific knowledge since the First Edition of this textbook has made the job of the editor more difficult than he would ever have imagined possible.

The purpose of this book has been to provide a definitive medical textbook for the field of endocrine and genetic diseases, from fetal life through adolescence. The book is oriented to the primary care physician, whether he be pediatrician, internist, gynecologist or family physician, and in the various sections differential diagnosis and treatment are highlighted.

In this edition, normal and abnormal growth problems are reviewed, with special emphasis on growth and endocrinology of the adolescent. Two new methods of height prediction are provided for the preadolescent and adolescent child, as well as the traditional Bayley-Pinneau method. Recent observations on delayed adolescence associated with psychosocial deprivation are presented, and present concepts of the relationships between the trophic hormone anomalies in deprivation dwarfism and anorexia nervosa are detailed. Circadian studies of gonadotropin secretion in anorexia nervosa have been important in elucidating some of the vexing findings in this syndrome. Revolutionary developments have taken place in the field of parathyroid and calcitonin metabo-

lism, with the availability of sensitive radioimmunoassay methods to make direct measurements of these hormones in human serum. The clinical management of the problem of hirsutism and the polycystic ovary syndrome in adolescent girls is delineated, as well as a schema for the investigation of irregular or abnormal menstrual cycles. The differential diagnosis of ovarian and of testicular tumors is discussed in detail, since the distribution of these neoplasms is quite different in childhood and adolescence, and textbook chapters oriented toward adults are inappropriate for the pediatric age group.

Careful attention has been paid to one of the most demanding problems in pediatrics: the diagnosis and management of infants with ambiguous genitalia. An entirely new classification based on karyotype analysis has been developed. The outmoded term "male pseudohermaphroditism" has finally been laid to rest, with the emergence of five biochemical errors of testosterone biosynthesis seen in 46,XY infants with ambiguous genitalia, together with two additional syndromes involving errors of testosterone metabolism in the periphery.

Since the First Edition of this book the advances in cytogenetics have been nothing less than spectacular. Elucidation of intrachromosomal rearrangements, a dream in the sixties, has now become a reality with the new banding techniques. Indeed, mapping of the human chromosomes is proceeding rapidly, as witness the 923 bands mapped by Yunis and Sanchez in late prophase and illustrated in the Appendix of this book.

Prenatal genetic diagnosis, both with respect to chromosomal abnormalities and biochemical errors of inheritance, is discussed in a chapter devoted to this nascent field. Tables listing the syndromes susceptible to prenatal diagnosis accompany this chapter. Much recent material on neonatal genetic screening and genetic counseling has been added.

John Money has greatly expanded his contributions on the psychologic aspects of endocrine and genetic diseases in children, including an important treatment of sex education and infertility counseling in endocrine-related disorders. A chapter on dysnutrition and its endocrine aspects takes up obesity on the one hand and on the other hand undernutrition as seen in anorexia nervosa, psychosocial deprivation, marasmus and kwashiorkor. Emerging reclassifications of hereditary skeletal dysplasias, the mucopolysaccharidoses, the mucolipidoses and syndromes of overgrowth appear in new chapters devoted to these subjects.

"Shield thou thee now; then mayest thou
survive this onset . . .
And the whizzing darts they sent . . .
I back to them will send another.
A flying shaft in defense against them.
. . . this is thy cure of Elves' shot;
This is thy cure of Hag's shot;
I will help thee."

LYTT I. GARDNER

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